

**REMARKS**

This application was carefully reviewed in light of the Office Action dated November 9, 2004. Claims 1 to 22 are in the application, of which Claims 1, 5 and 19 are the independent claims. Claim 5 has been amended. Reconsideration and further examination are respectfully requested.

In the Office Action, Claims 5 to 18 were rejected under 35 U.S.C. § 112, ¶ 2, for allegedly being indefinite. Since Claim 5 was amended in accordance with the Examiner's suggestion, reconsideration and withdrawal of the § 112, ¶ 2 rejection are therefore respectfully requested.

Claims 1, 5, 8, 9, 11, 15, 16, and 18 to 22 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 4,895,106 (Barnes); Claims 3, 4 and 7 were rejected under 35 U.S.C. § 103(a) over Barnes; Claims 2 and 6 were rejected under 35 U.S.C. § 103(a) over Barnes in view of U.S. Patent Application Publication No. 2002/0088383 A1 (Barry); Claim 10 was rejected under 35 U.S.C. § 103(a) over Barnes in view of U.S. Patent No. 3,581,945 (Savage); Claims 12 and 13 were rejected under 35 U.S.C. § 103(a) over Barnes in view of U.S. Patent No. 4,779,765 (Neumeyer); Claims 12 and 14 were rejected under 35 U.S.C. § 103(a) over Barnes in view of U.S. Patent No. 4,541,549 (Hadley); and Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Canadian Patent Application No. 2,248,436 (Andersson). Reconsideration and withdrawal of the § 102 and § 103 rejections are respectfully requested.

The present invention generally relates to the dispensing of seeds and chemical granules, in which chemical granules are dispensed through a granule tube into a seed dispensing tube, where the granule tube is connected to the seed dispensing tube at a location above a lower opening of the seed dispensing tube, and where the lower opening of the seed dispensing tube is covered with a brush. A seed is dispensed through the seed dispensing tube, where the brush holds chemical

granules within the seed dispensing tube such that chemical granules accumulate within the seed dispensing tube, and where the brush allows a seed and accumulated chemical granules to pass through the lower opening when the seed is dispensed via the seed dispensing tube.

The applied art is not seen to teach or suggest the features of the present invention. Specifically, the applied art is not seen to disclose at least the features of *i*) a brush covering the lower opening of a seed dispensing tube, or *ii*) a brush which allows a seed and accumulated chemical granules to pass through a lower opening of a seed dispensing tube when the seed is dispensed via the seed dispensing tube.

Referring specifically to claim language, independent Claim 1 describes a planter unit including a seed dispensing tube for dispensing seeds, including an upper opening for receiving a seed and a lower opening for dispensing the seed, a brush covering the lower opening, and a granule tube connected to the seed dispensing tube at a location above the lower opening, for dispensing chemical granules into the seed dispensing tube. The brush holds chemical granules within the seed dispensing tube such that chemical granules accumulate within the seed dispensing tube. The brush allows a seed and accumulated chemical granules to pass through the lower opening when a seed is dispensed via the seed dispensing tube.

Independent Claim 5 describes a seed and chemical granule dispensing system including a seed hopper for storing seeds, a granule storage hopper for storing chemical granules, and a planter unit. The planter unit further includes a seed dispensing tube for dispensing seeds stored in the seed hopper, including an upper opening for receiving a seed and lower opening for dispensing the seed. The planter unit also includes a brush covering the lower opening, and a granule tube for dispensing chemical granules stored in the granule storage hopper into the seed dispensing tube, connected to the seed dispensing tube at a location above the lower opening. The brush holds chemical granules

within the seed dispensing tube such that chemical granules accumulate within the seed dispensing tube. The brush allows a seed and accumulated chemical granules to pass through the lower opening when a seed is dispensed via the seed dispensing tube.

Independent Claim 19 describes a method of dispensing seeds and chemical granules, including the step of dispensing chemical granules through a granule tube into a seed dispensing tube, where the granule tube is connected to the seed dispensing tube at a location above a lower opening of the seed dispensing tube, and where the lower opening of the seed dispensing tube is covered with a brush. The method further includes the step of dispensing a seed through the seed dispensing tube, where the brush holds chemical granules within the seed dispensing tube such that chemical granules accumulate within the seed dispensing tube, and where the brush allows a seed and accumulated chemical granules to pass through the lower opening when the seed is dispensed via the seed dispensing tube.

Barnes is merely seen to describe a seed conveying apparatus with a substantially horizontal auger tube, in which is disposed an auger with brush flighting which mechanically transports seeds and associated treatments through the tube. *See Barnes, Abstract; col. 3, ll. 20 to 38; and Figure 2.* Although the Office Action alleges that Barnes discloses the aforementioned distinguishing features of the present invention, Applicants respectfully disagree.

Initially, the Office Action asserts that, in Barnes, brush 36 covers an unnumbered lower opening. As clearly depicted in Figure 2 and 8, however, brush 36 is oriented substantially perpendicular to spout 30 on discharge end 32, and is not seen to cover any lower opening, or impede the flow of seeds or chemicals through any lower opening in any way. Indeed, brush 36 is seen to convey a large number of seeds up to an uncovered opening within spout 30, so that they can fall freely to the ground below. *See Barnes, col. 5, ll. 9 to 27.* As such, Applicants assert that

Barnes is not seen to disclose at least the feature of a brush covering the lower opening of a seed dispensing tube.

The Office Action also asserts that Barnes discloses that brush 36 allows a seed and accumulated chemical granules to pass through the lower opening when a seed is dispensed via the seed dispensing tube. Again, Applicants respectfully disagree. In Barnes, seeds are seen to be dispensed into seed dispensing auger tube 29 at inlet end 28, which is on the obverse end of horizontal auger tube 29 as discharge end 32. *See Barnes*, col. 3, ll. 15 to 25; and Figure 2. Since resilient bristles 148 span nearly the entire cross-section of auger tube 29, seeds and accumulated chemical granules dispensed via inlet end 28 would be seen to remain at inlet end 28 of auger tube 29, and would in fact be prevented from moving or sliding toward discharge end 32 or spout 30, by brushes 36. *See Barnes*, col. 5, ll. 9 to 27; and Figure 2. As such, and unlike the present invention, when the seed is dispensed via the seed dispensing auger tube 29, brush 36 is not seen to allow a seed and accumulated chemical granules to pass through a lower opening of a seed dispensing tube. *See Barnes*, Figure 2.

Accordingly, Barnes is not seen to disclose the features of the present invention, including at least the features of *i*) a brush covering the lower opening of a seed dispensing tube, or *ii*) a brush which allows a seed and accumulated chemical granules to pass through a lower opening of a seed dispensing tube when the seed is dispensed via the seed dispensing tube.

Based on the foregoing amendments and remarks, independent Claims 1, 5, and 19 are believed to be allowable over the applied combination of references. The other rejected claims in the application are each dependent from the independent claims and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to

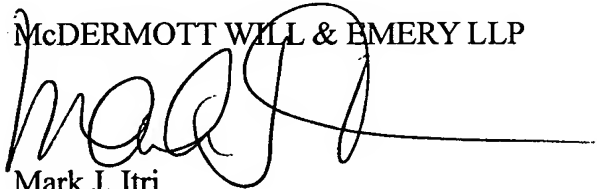
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define additional aspects of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Applicants' undersigned attorney may be reached in our Orange County office by telephone at (949) 851-0633. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Mark J. Itri', is written over the printed name of the attorney.

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